

We Claim:

1. A multi-grip needle and catheter assembly, comprising:
  - an introducer needle having a proximal end and a distal end;
  - a needle hub connected to the proximal end of the introducer needle,
  - 5 wherein the needle hub includes lateral sides, a proximal end and a distal end;
  - concave finger grips, each having a substantially oval shape and disposed along the lateral sides of the needle hub;
  - wherein the proximal end of the needle hub has a convex shape, thereby forming a thumb pad;
  - 10 a needle shield having an external surface, a distal end and a proximal end and being slidably disposed about the introducer needle distal of the needle hub, wherein at least the proximal end of the needle shield is disposed between the finger grips;
  - a push tab extending radially from the distal end of the needle shield
  - 15 having a convex distal face and a concave proximal face, wherein the push tab is distal to the finger grips;
  - a catheter having a proximal end and a distal end, wherein the catheter is slidably disposed about the introducer needle;
  - a catheter adapter connected to the proximal end of the catheter and
  - 20 having a proximal end and a distal end;
  - at least one wing attached to the catheter adapter and extending radially outward, wherein the wing includes a distal edge and a proximal edge, wherein the distal edge is convex and positioned distal to the push tab.
- 25 2. The needle and catheter assembly of claim 1 further comprising a side port attached to the catheter adapter and disposed proximal of the distal edge of the wing.

3. The needle and catheter assembly of claim 2 further comprising ribs disposed on the proximal face and the distal face of the push tab.
4. The needle and catheter assembly of claim 3 wherein an opening is  
5 disposed in the thumb pad at its center.
5. The needle and catheter assembly of claim 4 wherein the push tab is between 0.1 and 0.3 inches tall.
- 10 6. The needle and catheter assembly of claim 5 wherein the push tab comprises a cantilever portion extending distally from the needle shield and at least one upstanding tab portion at a distal end of the cantilever portion.
7. The needle and catheter assembly of claim 1 wherein the distal edge of  
15 the at least one wing is a smooth continuous surface and the proximal edge of the at least one wing is straight.
8. A multi-grip needle and catheter assembly, comprising:
  - an introducer needle having a proximal end and a distal end;
  - 20 a needle hub connected to the proximal end of the introducer needle, wherein the needle hub includes lateral sides, a proximal end and a distal end;
  - finger grips disposed along the lateral sides of the needle hub;
  - a thumb pad disposed at the proximal end of the needle hub;
  - a needle shield having an external surface, a distal end and a proximal  
25 end and being slidably disposed about the introducer needle;
  - a push tab attached to and extending radially from the distal end of the needle shield, the push tab having a convex distal face and a concave proximal face, wherein the push tab is distal to the finger grips;

a catheter having a proximal end and a distal end, wherein the catheter is slidably disposed about the introducer needle;

a catheter adapter connected to the proximal end of the catheter and having a proximal end and a distal end;

5 a wing attached to the catheter adapter and extending radially outward, wherein the wing includes a distal edge and a proximal edge, wherein the distal edge is positioned distal to the push tab.

9. The multi-grip needle and catheter assembly of claim 8 wherein:

10 the finger grips have an oval shape;

the thumb pad is convex;

the needle shield is disposed between the finger grips;

the push tab is between 0.1 and 0.3 inches tall, and 0.40 inches wide;

and

15 the distal edge of the wing has a smooth, continuous convex shape along its entire length.

10. The multi-grip needle and catheter assembly of claim 9 further comprising a side port attached to the catheter adapter and formed integral with the wing.

11. A multi-grip needle and catheter assembly, comprising:

an introducer needle having a proximal end and a distal end;

a needle hub connected to the proximal end of the introducer needle, wherein the needle hub includes lateral sides, a proximal end and a distal end;

25 finger grips disposed along the lateral sides of the needle hub;

a thumb pad disposed at the proximal end of the needle hub;

a needle shield having an external surface, a distal end and a proximal end and being slidably disposed about the introducer needle;

a push tab attached to and extending radially from the distal end of the needle shield, wherein the push tab is distal to the finger grips;

a catheter having a proximal end and a distal end, wherein the catheter is slidably disposed about the introducer needle;

5 a catheter adapter connected to the proximal end of the catheter and having a proximal end and a distal end;

at least one wing attached to the catheter adapter and extending radially outward, wherein the wing includes a distal edge and a proximal edge, wherein the distal edge has a smooth convex shape and is positioned distal to the push  
10 tab.

12. The needle and catheter assembly of claim 11 further comprising a side port attached to the catheter adapter and disposed proximal of the distal edge of the wing.

15 13. The needle and catheter assembly of claim 11 further comprising ribs disposed on the proximal face and the distal face of the push tab.

14. The needle and catheter assembly of claim 11 wherein an opening is  
20 disposed in the thumb pad at its center.

15. The needle and catheter assembly of claim 11 wherein the push tab is between 0.1 and 0.3 inches tall.

25 16. The needle and catheter assembly of claim 11 wherein the push tab comprises a cantilever portion extending distally from the needle shield and at least one upstanding tab portion at a distal end of the cantilever portion.

17. The multi-grip needle and catheter assembly of claim 11 wherein:

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the finger grips have an oval shape;

the thumb pad is convex;

the needle shield is disposed between the finger grips;

the push tab is between 0.1 and 0.3 inches tall, and 0.40 inches wide;

5 and

the proximal edge of the wing is straight.